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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,231	06/29/2001	David Michael Koelle	AUS920010286US1	8640

35525 7590 12/08/2005

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ART UNIT	**PAPER NUMBER**
2164	

DATE MAILED: 12/08/2005

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/895,231
Filing Date: June 29, 2001
Appellant(s): KOELLE ET AL.

Stephen R. Tkacs, Reg. No. 46,430
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 9/20/2005 appealing from the Final Office Action mailed on 4/25/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The examiner in the rejection of the claims under appeal relies upon no evidence.

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claims 1-29 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kenner et al. (US Patent 6,496,856). The rejection is set forth-in Final Office Action mailed on 4/25/2005.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kenner et al. (US Patent 6,496,856) hereinafter Kenner.

3. As per independent claim 1, Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed step of "organizing the set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed step of "assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value.) The video clips are duplicated on the identified extended SRUs. (Fig. 1, col. 8, lines 35-47). Finally, Kenner teaches the claimed step of "responsive to failure of a

service within the distributed set of services, transferring management of the related set of data managed by the failed service to another service within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28).

4. As per dependent claim 2, Kenner teaches the claimed step of "the optimization criteria is based on location of the service within the distributed set of services" as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47).

5. As per dependent claim 3, Kenner teaches the claimed step of "detecting the failed service by a set of remaining services within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22 (Fig. 1, col. 14, lines 20-23). Further, Kenner teaches the claimed step of "examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as if the SRU under-run count

exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 23-28).

6. As per dependent claim 4, Kenner teaches the claimed step of "determining whether data within the related set of data are at the same location as a service within the set of remaining services" as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 (Fig. 1, col. 14, lines 28-32). Further, Kenner teaches the claimed step of "responsive to data within the related set of data at the same location as a service within the set of remaining services, attaching the data to the service" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

7. As per dependent claim 5, Kenner teaches the claimed step of "responsive to an additional service joining the distributed set of services, querying management of the data within the related sets of data" as data is preferably maintained on the extended SRUs 26 which are most often queried for the data, duplicated on local SRUs 18 which most often request the data or may be duplicated on other remote SRUs 38 as space

allows (Fig. 1, col. 14, lines 43-46). Further, Kenner teaches the claimed step of "assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the supply and demand approach mediated by PIM 22 in response to DSI monitoring inputs , provides fast access to most requested information and efficient storage with in a maximum of useful redundancy without waste or loss of performance. The network is also configured always to store each audio-visual entry in at least one other location (Fig. 1, col. 14, lines 47-53).

8. As per independent claim 6, Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed step of "organizing the set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed step of "assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through

audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value). The video clips are duplicated on the identified extended SRUs. (Fig. 1, col. 8, lines 35-47). Further, Kenner teaches the claimed step of "responsive to an additional service joining the distributed set of services, querying management of the data within the related sets of data" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38). Finally, Kenner teaches the claimed step of "assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

9. As per dependent claim 7, Kenner teaches the claimed step of "the optimization criteria is based on location of the service within the distributed set of services" as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47).

10. As per dependent claim 8, Kenner teaches the claimed step of "detecting a failed service in the distributed set of services by a set of remaining services within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22 (Fig. 1, col. 14, lines 20-23). Further, Kenner teaches the claimed step of "examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as if the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 23-28).

11. As per dependent claim 9, Kenner teaches the claimed step of "determining whether data within the related set of data are at the same location as a service within the set of remaining services" as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 (Fig. 1, col. 14, lines 28-32). Further, Kenner teaches the claimed step of "responsive to data within the related set of data at the same location as a service within the set of remaining services, attaching the data to the service" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to

lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

12. As per independent claim 10, which claims a system. Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed "a system bus" as the information obtained on a high speed network 24 or communication line 16 (Fig. 1, col. 7, line 66 to col. 8, line 2). Further, Kenner teaches the claimed "a memory, including a set of instructions, functionally connected to the system bus" as the local storage and retrieval unit SRU 18 may comprise a file server for a local area network, with one or more integral or connected storage devices and each terminal 14 interacts with the local SRU 18 via a network connection, e.g. as a network node, using conventional network protocols and topologies (Fig. 1, col. 6, lines 14-20). Further, Kenner teaches the claimed "a processing unit functionally connected to the system bus" as the connections between terminal 14 and the local SRU 18 can be within the same computer or between two or more computers located within a building, which are linked together on a local area network (Fig. 1, col. 6, lines 14-20). Further, Kenner teaches the claimed "the processing unit executes the set of instructions from the memory to organize a set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most

interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed "the data in each related set of data has at least one attribute between members, the processing unit assigns, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value). The video clips are duplicated on the identified extended SRUs. (Fig. 1, col. 8, lines 35-47). Finally, Kenner teaches the claimed "responsive to a failed service within the distributed set of services, the processing unit transfers management of the related set of data managed by the failed service to another service within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28).

13. As per independent claim 11, which claims for a system. Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and

retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed "a system bus" as the information obtained on a high speed network 24 or communication line 16 (Fig. 1, col. 7, line 66 to col. 8, line 2). Further, Kenner teaches the claimed "a memory, including a set of instructions, functionally connected to the system bus" as the local storage and retrieval unit SRU 18 may comprise a file server for a local area network, with one or more integral or connected storage devices and each terminal 14 interacts with the local SRU 18 via a network connection, e.g. as a network node, using conventional network protocols and topologies (Fig. 1, col. 6, lines 14-20). Further, Kenner teaches the claimed "a processing unit functionally connected to the system bus" as the connections between terminal 14 and the local SRU 18 can be within the same computer or between two or more computers located within a building, which are linked together on a local area network (Fig. 1, col. 6, lines 14-20). Further, Kenner teaches the claimed "the processing unit executes the set of instructions from the memory to organize a set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed step of "the data in each related set of data has at least one attribute between members, the processing unit assigns, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria, responsive to an additional service joining the distributed set of services" as whenever

an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28). Finally, Kenner teaches the claimed "the processing unit queries management of the data within the related sets of data, and the processing unit assigns management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

14. As per independent claim 12, Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed "organizing means for organizing the set of data into a plurality of related sets of data, wherein the data in each related set of data has at least one attribute between members" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed "assigning means for

assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value) (Fig. 1, col. 8, lines 35-47). The video clips are duplicated on the identified extended SRUs. (Fig. 1, col. 8, lines 35-47). Finally, Kenner teaches the claimed "transferring means, responsive to a failed service within the distributed set of services, for transferring management of the related set of data managed by the failed service to another service within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28).

15. As per dependent claim 13, Kenner teaches the claimed "the optimization criteria is based on location of the service within the distributed set of services" as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47).

16. As per dependent claim 14, Kenner teaches the claimed "detecting means for detecting the failed service by a set of remaining services within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22 (Fig. 1, col. 14, lines 20-23). Further, Kenner teaches the claimed "examining means for examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as if the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 23-28).

17. As per dependent claim 15, Kenner teaches the claimed "determining means for determining whether data within the related set of data are at the same location as a service within the set of remaining services" as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 (Fig. 1, col. 14, lines 28-32). Further, Kenner teaches the claimed "attaching means, responsive to data within the related set of data at the same location as a service within the set of remaining services, for attaching the data to the services" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be

moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

18. As per dependent claim 16, Kenner teaches the claimed "querying means, responsive to an additional service joining the distributed set of services, for querying management of the data within the related sets of data" as data is preferably maintained on the extended SRUs 26 which are most often queried for the data, duplicated on local SRUs 18 which most often request the data or may be duplicated on other remote SRUs 38 as space allows (Fig. 1, col. 14, lines 43-46). Further, Kenner teaches the claimed "assigning means for assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the supply and demand approach mediated by PIM 22 in response to DSI monitoring inputs, provides fast access to most requested information and efficient storage with in a maximum of useful redundancy without waste or loss of performance. The network is also configured always to store each audio-visual entry in at least one other location (Fig. 1, col. 14, lines 47-53).

19. As per independent claim 17, which claims for a system. Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed step of

"organizing means for organizing the set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed step of "assigning means for assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value) (Fig. 1, col. 8, lines 35-47). The video clips are duplicated on the identified extended SRUs. (Fig. 1, col. 8, lines 35-47). Further, Kenner teaches the claimed step of "querying means, responsive to an additional service joining the distributed set of services, for querying management of the data within the related sets of data" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28). Finally, Kenner teaches the claimed step of "assigning means for assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-

visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

20. As per dependent claim 18, Kenner teaches the claimed step of "the optimization criteria is based on location of the service within the distributed set of services" as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47).

21. As per dependent claim 19, Kenner teaches the claimed step of "detecting means for detecting a failed service in the distributed set of services by a set of remaining services within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22 (Fig. 1, col. 14, lines 20-23). Further, Kenner teaches the claimed step of "examining means for examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as if the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 23-28).

22. As per dependent claim 20, Kenner teaches the claimed step of "determining means for determining whether data within the related set of data are at the same location as a service within the set of remaining services " as in the event that the video clip is only stored at this location; then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 (Fig. 1, col. 14, lines 28-32). Further, Kenner teaches the claimed step of " attaching means, responsive to data within the related set of data at the same location as a service within the set of remaining service, attaching the data to the service " as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

23. As per independent claim 21, which claims for a program product. Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed "instructions for organizing the set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the

user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed "instructions for assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value). The video clips are duplicated on the identified extended SRUs. (Fig. 1, col. 8, lines 35-47). Finally, Kenner teaches the claimed "instructions, responsive to a failed service within the distributed set of services, for transferring management of the related set of data managed by the failed service to another service within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28).

24. As per dependent claim 22, Kenner teaches the claimed "the optimization criteria is based on location of the service within the distributed set of services" as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept

duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47).

25. As per dependent claim 23, Kenner teaches the claimed "instructions for detecting the failed service by a set of remaining service within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22 (Fig. 1, col. 14, lines 20-23). Further, Kenner teaches the claimed "instructions for examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as if the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 23-28).

26. As per dependent claim 24, Kenner teaches the claimed "instructions for determining whether data within the related set of data are at the same location as a service within the set of remaining services " as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 (Fig. 1, col. 14, lines 28-32). Further, Kenner teaches the claimed "instructions, responsive to data within the related set of data at the same location as a service within the set of

remaining services, for attaching the data to the service" as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

27. As per dependent claim 25, Kenner teaches the claimed "instructions, responsive to an additional service joining the distributed set of service, for querying management of the data within the related sets of data" as data is preferably maintained on the extended SRUs 26 which are most often queried for the data, duplicated on local SRUs 18 which most often request the data or may be duplicated on other remote SRUs 38 as space allows (Fig. 1, col. 14, lines 43-46). Further, Kenner teaches the claimed "instructions for assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the supply and demand approach mediated by PIM 22 in response to DSI monitoring inputs, provides fast access to most requested information and efficient storage with in a maximum of useful redundancy without waste or loss of performance. The network is also configured always to store each audio-visual entry in at least one other location (Fig. 1, col. 14, lines 47-53).

28. As per independent claim 26, which claims for a program product. Kenner teaches a video clip storage and retrieval system for user to receive comprehensive data collected from one or more databases by request from a user's multimedia

computer. The user request is transmitted to the user's primary index manager via a local storage and retrieval unit (SRU) (col. 3, lines 6-10 and 34-37). Kenner teaches the claimed step of "instructions for organizing the set of data into a plurality of related sets of data" as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done provides the (Fig. 1, col. 8, lines 27-32). Further, Kenner teaches the claimed step of "instructions for assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria" as the primary index manager (PIM) determines whether it is managing an extended SRU 26 based on searching through audio-visual data index database to identify the video clips that have been accessed most frequently (FDVs) (the optimization criteria is the most frequently accessing compared a predetermined value.) The video clips are duplicated on the identified extended SRU (Fig. 1, col. 8, lines 35-47). Further, Kenner teaches the claimed step of "instructions, responsive to an additional service joining the distributed set of services, for querying management of the data within the related sets of data" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. The PIM 22 directs further requests to alternate SRUs for video clip information (Fig. 1, col. 14, lines 20-28). Finally Kenner teaches the claimed "instructions for assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria" as the SRU

under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

29. As per dependent claim 27, Kenner teaches the claimed step of "the optimization criteria is based on location of the service within the distributed set of services" as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47).

30. As per dependent claim 28, Kenner teaches the claimed "instructions for detecting a failed service in the distributed set of services by a set of remaining services within the distributed set of services" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22 (Fig. 1, col. 14, lines 20-23). Further, Kenner teaches the claimed step of "instructions for examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as if the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 23-28).

31. As per dependent claim 29, Kenner teaches the claimed step of "instructions for determining whether data within the related set of data are at the same location as a service within the set of remaining services" as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 (Fig. 1, col. 14, lines 28-32). Further, Kenner teaches the claimed step of "instructions, responsive to data within the related set of data at the same location as a service within the set of remaining services, for attaching the data to the service " as the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 33-38).

(10) Response to Argument

A. Rejection of claims 1-5, 10, 12-16 and 21-25 under 35 U.S.C. section 102(e).

Claim 1: The appellant claims a method for managing a set of data by a distributed set of services. The prior art used to reject this claim is Kenner et al. (US Patent 6,496,856) hereinafter Kenner. He teaches a video clip storage and retrieval system whereby the user receives comprehensive data collected from one or more databases by request from a user's multimedia terminal. The comprehensive data is provided in the form of selected video clips coupled with corresponding database

information. The user request is transmitted to the user's primary index manager (PIM) via a local storage and retrieval unit (SRU). The local SRU attaches a Regional Identifier to the request to assist the PIM to efficiently search for, locate and report on the requested information. The local SRU provides temporary for the users most requested video clips, and before the query is sent to the user's PIM, the local SRU is polled for the requested video clips. The user query, amended to contain a Regional identifier (RI) and to reflect any local matches, is then forwarded to the PIM (col. 3, lines 6-12 and 34-44).

Appellant argued on page 14 as "Kenner fails to teach or suggest organizing video clips into related sets." The Examiner respectfully disagrees with the Appellant because Kenner do teach as the SRU command logic sees to the duplication of popular videos on alternate SRUs 26. It also places copies of video segments on SRUs geographically closer to the user most interest in those videos. Duplication of data is done during the non-peak periods of the system (Fig. 1, col. 8, lines 27-32). Kenner also teaches as the system provides a plurality of extended SRUs, each of which communicates with PIM and data Sequencing Interface (DSI). This provides a flexible, high capacity, high throughput system which can be readily extended as needed, and can provide for efficient distribution and backup of video clips and other data on the system (Fig. 1, col. 14, lines 56-63). Further, Appellant argued as "Kenner fails to teach assignment of data sets based on optimization criteria." Again the Examiner respectfully disagrees with the Appellant because the current invention on page 14,

lines 1-3 stated as "an optimal service may be used for load balancing data between services." Kenner do teach load balancing as the SRU under-run counter parameter identifies the location of "over-accessed" SRUs, audio-visual data will be moved or copied form these heavily loaded SRUs to more lightly loaded SRUs based on their under-run levels, in an effort to distribute or flatten SRU demand (col. 14, lines 33-39).

Further, Appellant argued on page 16 as "Kenner does not teach what happens if a SRU fails to deliver the video clip altogether." The Examiner respectfully disagrees with the Appellant because Kenner do teach as whenever an SRU fails to deliver the requested video clip, the DSI increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM. If the SRU under-run count exceeds a predetermined threshold value the PIM directs further requests away form this affected SRU by having the DSI query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 20-28).

Further, Appellant argued on page 16 as "Furthermore, Kenner does not teach that assignment of management of data sets is change based on optimization criteria." The Examiner respectfully disagrees with the Appellant because Appellant is misinterpreting the reference, Kenner do teach the optimization criteria on two aspects: 1) load balancing of SRUs is handled and 2) whenever an SRU fails to deliver the requested video clip, the PIM transfers the video clip information to alternate SRU which is under-run. The citations are given in the above paragraph.

Appellant further argues on page 16 as "However, the Final Office Action then concludes that the optimization technique used by Kenner is inherent." Again, the Examiner respectfully disagrees with the Appellant because, Appellant misunderstood the prior art, Kenner explicitly teaches optimization criteria and there is no need to consider as inherent and citations are given in the above paragraph.

Further, Appellant stated on page 17 as "The applied reference fails to teach or suggest each and every claim limitation." Again, the Examiner respectfully disagrees with the Appellant because, in the Final Office Action each limitation of claim 1 has been addressed by explaining the teachings of Kenner with citations and no inherent has been brought in the rejection.

A(1). Rejection of claims 2, 13 and 22 under 35 U.S.C. section 102(e).

Claims 2, 13 and 22 are dependent on independent claim 1, 12 and 21 respectively. All three claims are basically claiming the same. Claim 2 stated as "The method as recited in claim 1, wherein the optimization criteria is based on location of the service within the distributed set of services." Kenner teaches as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended

SRU 26 (Fig. 1, col. 8, lines 38-47). The PIM places copies of video segments on SRUs geographically closer to the users most interested in those videos (Fig. 1, col. 8, lines 28-30).

Appellant argues on page 18, as "However, the Final Office Action proffers no explanation as to how duplicating video clips based on the most frequently requested is somehow equivalent to assigning management of data sets to by data services based on location of service." Examiner respectfully disagrees with the Appellant because, management of data sets by data services and duplicate copies of video clips placing on SRUs geographically closer to the users most interested in those videos. In this case, the information needed is placed closer so that the user can access easily and quicker than getting from a central location through communication network.

A(2). Rejection of claims 3, 14 and 23 under 35 U.S.C. section 102(e).

Claims 3, 14 and 23 are dependent on independent claims 1, 12 and 21 respectively. All three claims are basically claiming the same. Claim 3 stated as "The method as recited in claim 1, detecting the failed service by a set of remaining services within the distributed set of services and examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. If the SRU under-run count exceeds a predetermined

threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 20-28).

Appellant argues on page 19, as "Appellants submit that Kenner, in fact, does not teach or fairly suggest a distributed set of data services wherein remaining data service examine data sets managed by a failed data service." Examiner respectfully disagrees with the Appellant argument because of misinterpretation of the reference. Kenner teaches as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. If the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 20-28).

A(3). Rejection of claims 4, 15 and 24 under 35 U.S.C. section 102(e).

Claims 4, 15 and 24 are dependent on dependent claims 3, 14 and 23 respectively. All three claims are basically claiming the same. Claim 4 stated as "the method as recited in claim 3, further comprising: determining whether data within the related set of data are at the same location as a service within the set of remaining services and responsive to data within the related set of data at the same location as a service within the set of remaining services, attaching the data to the service" as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26

and the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 28-38).

Appellant argues on page 20 as "Appellants submit that Kenner, in fact, does not teach or fairly suggest determining whether data within the related set of data are at the same location as a service within the set of remaining services." Again, Examiner respectfully disagrees with the Appellant because, Kenner clearly teaches two fold approach as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 and the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 28-38).

B. Rejection of claims 6-9, 11, 17-20 and 26-29 under 35 U.S.C. section 102(e).

Appellant argues on page 22 as "The applied reference fails to teach or suggest each and every claimed limitation. Therefore, Kenner does not anticipate claim 6." Examiner respectfully disagrees with the Appellant because, management of data sets by data services and duplicate copies of video clips placing on SRUs geographically closer to the users most interested in those videos. In both cases the information

needed is placed closer so that the user can access easily and quicker than getting from a central location through communication network. Further, Kenner teaches to balance the load, SRU under-run count parameter identifies the location of "over-accessed' SRUs, audio-visual data will be moved or copied from these heavily loaded SRUs to more lightly loaded SRUs based on their under-run levels, in order to distribute or flatten SRU demand (co. 14, lines 33-38). In the Final Office Action, Every limitation of the claim 6 has been addressed by explaining the reference with the citation.

B(1). Rejection of claims 7, 18 and 27 under 35 U.S.C. section 102(e).

Claims 7, 18 and 27 are dependent on independent claims 6, 17 and 26 respectively. All three claims are basically claiming the same. Claim 7 stated as "The method as recited in claim 6, wherein the optimization criteria is based on location of the service within the distributed set of services." Kenner teaches as the Audio-visual data index database is searched to determine most frequently accessed SRUs in comparison to predetermined value. Those extended SRUs are selected for the duplication or transferal. The selected SRUs are evaluated to whether they can accept duplicate copy of the video clip. If so, the FDV is duplicated on the identified extended SRU 26 (Fig. 1, col. 8, lines 38-47). The PIM places copies of video segments on SRUs geographically closer to the users most interested in those videos (Fig. 1, col. 8, lines 28-30).

Appellant argues on page 22, as "However, the Final Office Action proffers no explanation as to how duplicating video clips based on the most frequently requested is

somehow equivalent to assigning management of data sets to by data services based on location of service." Examiner respectfully disagrees with the Appellant because, management of data sets by data services and duplicate copies of video clips placing on SRUs geographically closer to the users most interested in those videos. In both cases the information needed is placed closer so that the user can access easily and quicker than getting from a central location through communication network.

B(2). Rejection of claims 8, 19 and 28 under 35 U.S.C. section 102(e).

Claims 8, 19 and 28 are dependent on independent claims 6, 17 and 26 respectively. All three claims are basically claiming the same. Claim 8 stated as "The method as recited in claim 6, detecting the failed service by a set of remaining services within the distributed set of services and examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service" as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. If the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 20-28).

Appellant argues on page 23, as "Appellants submit that Kenner, in fact, does not teach or fairly suggest a distributed set of data services wherein remaining data service examine data sets managed by a failed data service." Examiner respectfully disagrees with the Appellant argument because of misinterpretation of the reference. Kenner

teaches as whenever an SRU fails to deliver the requested video clip, the DSI 30 increments the SRU under-run counter for that SRU and eventually communicates this information to the PIM 22. If the SRU under-run count exceeds a predetermined threshold value the PIM 32 directs further requests away form this affected SRU by the DSI 30 query alternate SRUs for the video clip information (Fig. 1, col. 14, lines 20-28).

B(3). Rejection of claims 9, 20 and 29 under 35 U.S.C. section 102(e).

Claims 9, 20 and 29 are dependent on dependent claims 8, 19 and 28 respectively. All three claims are basically claiming the same. Claim 9 stated as "the method as recited in claim 8, further comprising: determining whether data within the related set of data are at the same location as a service within the set of remaining services and responsive to data within the related set of data at the same location as a service within the set of remaining services, attaching the data to the service" as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 and the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 28-38).

Finally, Appellant argues on page 23 as "Appellants submit that Kenner, in fact, does not teach or fairly suggest determining whether data within the related set of data

are at the same location as a service within the set of remaining services." Again, Examiner respectfully disagrees with the Appellant because, Kenner clearly teaches two fold approach as in the event that the video clip is only stored at this location, then a delay will be encountered as the DSI 30 waits for the video information to be downloaded. The PIM 22 will also direct that the number of FDVs to be decremented for this affected extended SRU 26 and the SRU under-run counter parameter identifies the location of over-accessed SRUs, audio-visual data will be moved or copied from heavily loaded SRUs to lightly loaded SRUs in an effort to distribute or flatten SRU demand (Fig. 1, col. 14, lines 28-38).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

The reference disclose the claimed invention of decentralized, self-regulating system for automatically discovering optimal configuration in a failure-rich environment. Kenner teaches a video clip storage and retrieval system whereby video clips, stored locally and /or at a ore remote location, can be requested and retrieved by a user at the user's multimedia computer. The primary index manager (PIM) also checks to see whether the video clips stored at the local SRU are current. The PIM handles very well

whenever SRU fails in consultation with DSI and sends video clips to under-run SRU in order to maintain load balance. PIM also sends duplicate copies of popular video clips to alternate SRUs. It also places video segments on SRUs geographically closer to the users most interested in those videos. Kenner teaches every claim and limitations extensively.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully Submitted,

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srp
December 6, 2005

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